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APPLIED GEOLOGY, INC.
ENVIRONMENTAL CONSULTANTS

October 7, 1991

Mr. Richard Spiese
Petroleum Sites Management Section
Vermont Department of
Environmental Conservation
103 South Main Street
Waterbury, Vermont 05676

RE: Results of Limited Petroleum Contamination Investigation, A & D Automotive, Vergennes, Vermont

Dear Rich:

As per your approval of the work outlined in our September 6, 1991 letter, we initiated the work on September 23, 1991 and recently completed it with a final field inspection on October 4, 1991. In reading your approval letter dated September 17, 1991, I just realized that you were never informed regarding when we were going to conduct the investigation. Between dodging the rainstorms and my being out of town the week of September 23rd, I'm afraid we overlooked this request. Please accept my apologies for not following through with this request. The work was basically carried out on a "when the conditions were acceptable" and "when we could fit it in" basis. The work was carried out and completed as outlined in our September 6, 1991 letter.

Our in-house workplan indicated that the following work was to be conducted:

1. A soil gas survey utilizing a 31 inch long masonry bit was to be conducted in the former underground storage tank (UST) area shown on **Figure 1**. Soil gas survey points were to be placed to a depth of 31 inches on 10 foot centers in an effort to define the presence or surface and/or shallow subsurface petroleum contamination. The soil gas survey methods were chosen because of the presence of clay soils and a shallow water table within two feet of the surface. Following the installation of each survey point, the open hole was to be evaluated with a 10.2eV PID to define the presence of absence of petroleum related vapors. Between survey points, the masonry bit was to be wiped down and evaluated with the PID to ensure the equipment was clean before placing the next survey point. If significant contamination

was found, additional points were to be placed to further define the nature of the contamination on an if needed basis.

2. A soil gas survey was to be conducted in the stockpiled soils shown on **Figure 1** using similar methodology. The survey points were to be placed on 5 foot centers either to a depth of 31 inches or to the top of native grade beneath the pile.

3. A receptor survey was to be conducted which included: locating water and sewer services, examining the sump (and its discharge) which controls shallow ground water beneath the A&D building, and examining drainage swales which bound the A&D property and collect surface water and shallow ground water draining to, through, and from the site.

4. Compile a brief summary letter report which defines the contaminant related status of the site.

The results of both soil gas surveys are presented on **Figure 1**. As is noted on the figure, only two hot spots identified by organic vapor readings in excess of 20 ppm were identified during the initial soil gas survey conducted on September 24, 1991. A follow up soil gas survey was conducted in each of these areas on October 2, 1991. The follow up survey in the area of vapor points #1 and #13 indicated that the presence of contaminants was surface related and of very limited extent. The contaminants in this area are attributed to non-point surface sources of a "drips and drops" nature. Less than one cubic yard of soil was scraped from this area before background levels (i.e. less than 5 ppm) were identified.

The second area shown on **Figure 1** which is associated with vapor points 19, 31, 41, 42, 44, 70, 71, and 72 was also further evaluated with a follow-up survey conducted on October 2, 1991. The follow-up survey (which was aided by a backhoe) indicated that the contaminant vapors were associated with the top 12 inches of the soil profile and attributable to the spillage of small amounts of petroleum products in the working areas which lie directly adjacent to the overhead doors of the automotive shop. It is apparent to me that all evidence of contaminants in excess of 20 ppm on the PID is associated with the surface part of the soil profile. I have requested that Mr. Dufresne remove 12-inches of soil from this area before he paves his yard this fall. It will be stockpiled properly on and covered with plastic adjacent to the existing soil stockpile.

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The soil vapor data collected from the stockpiled clay soils that were excavated from around the former USTs indicate the presence of no more than 1.0 ppm of contaminant vapors. In short, the soils are clean and ready for spreading or for use as fill. The lack of contaminant presence less than three months after the clay soils were excavated and placed on and under plastic suggest that the zone of contaminated soils around the former USTs was either non-existent or extremely localized. In any case the soil vapor data from the stockpile provides concrete evidence that there was not an extensive contaminated soil problem associated with in the area of the former USTs.

The results of the receptor survey indicated that:

1. The water and sewer lines enter A&D Automotive at the west end of the building and are well isolated from the former UST area.

2. The sump and water discharging from the sump show no signs of contaminant presence which could be attributed to a shallow ground water contamination problem in the area of the former USTs. The discharge water is crystal clear and has no identified PID level associated with it.

3. A ... s associated with A&D Automotive st... um contaminant presence. No pc... d associated with any water draining frc...

4. Sir... is served by public water and sewer, the ... receive impacts of contamination if it w... exist on the A&D Automotive site. In short, there are no private wells on or around the site.

The resu... nd receptor based evaluation provide no evidence th... on problem exists in the area of the former USTs. I... leaked in this area, it was extremely minor and mus... the stockpiled soils were excavated from the forme... 91 and June 26, 1991. Following the removal of the ... ent to the overhead doors, there will be no soils remaining in the former UST area with an identified PID level in excess of 20 ppm on the PID. On the basis of the results which have been generated, it is my professional opinion that the petroleum contamination that was identified during the removal of the USTs was both very minor and removed from the subsurface at that time. The evidence of contaminants which

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I would like to see sample collected for lab analysis, either by LAG or by us. If we're paying, let's have LAG!

If sump H_2O ok then all that's left will be soils. Thanks Chuck

we did identify is attributed to very minor surface type spillage which normally takes place on a gas station or automotive shop site.

If you have any questions or concerns with regard to this matter, please do not hesitate to call me at 802-453-4384.

Very truly yours,

Stephen Revell, C.P.G.S.

SR/smd

Enclosures

cc: Henry Dufresne

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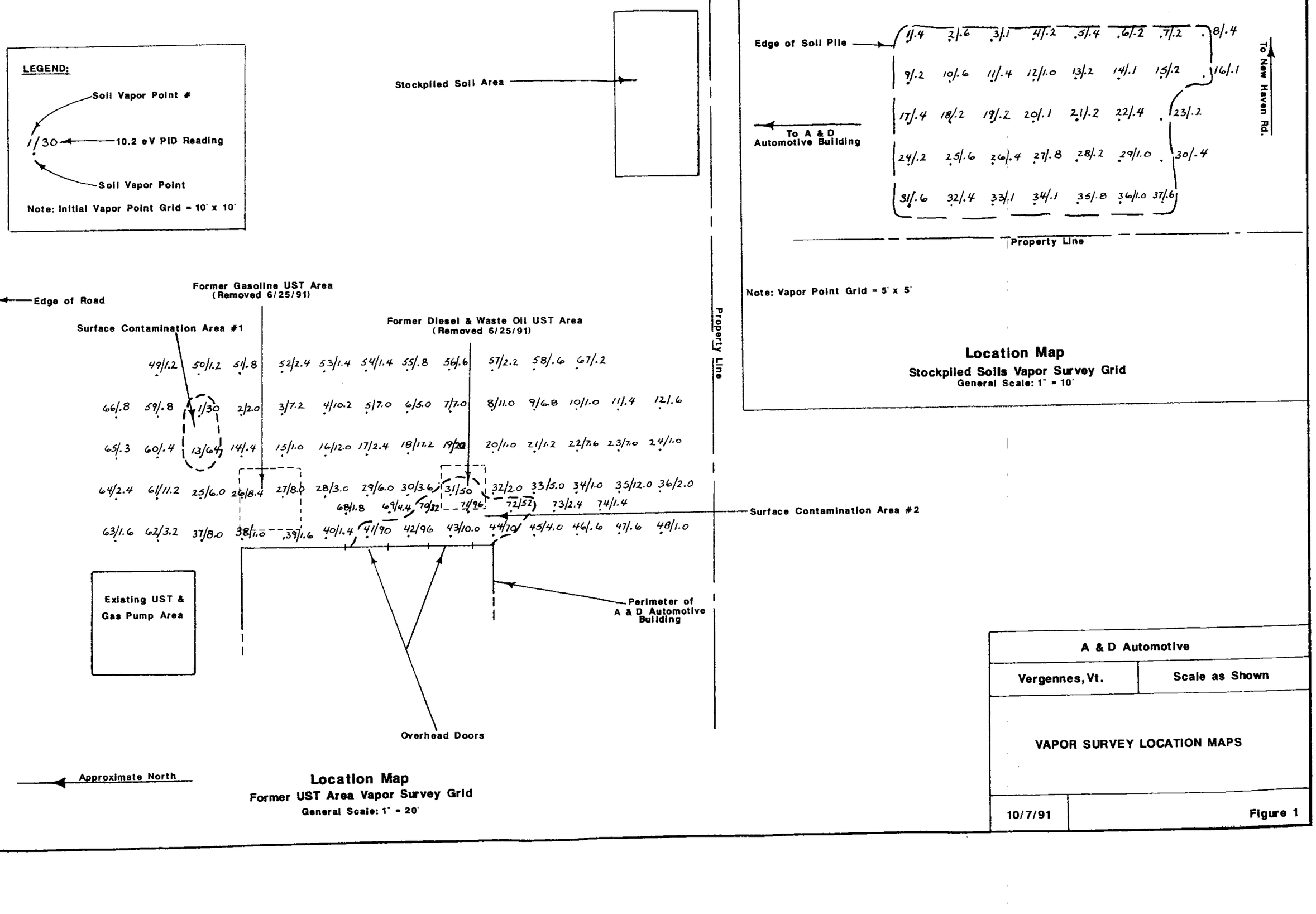
LEGEND:
Soil Vapor Point #
1/30
10.2 eV PID Reading
Soil Vapor Point
Note: Initial Vapor Point Grid = 10' x 10'
Stockpiled Soil Area
Edge of Soil Pile
To New Haven Rd.
To A & D Automotive Building
Property Line
Note: Vapor Point Grid = 5' x 5'
Location Map
Stockpiled Soils Vapor Survey Grid
General Scale: 1" = 10'
NEW HAVEN ROAD
Edge of Road
Former Gasoline UST Area (Removed 6/25/91)
Surface Contamination Area #1
Former Diesel & Waste Oil UST Area (Removed 6/25/91)
Property Line
Surface Contamination Area #2
Existing UST & Gas Pump Area
Perimeter of A & D Automotive Building
Overhead Doors
Approximate North
Location Map
Former UST Area Vapor Survey Grid
General Scale: 1" = 20'
A & D Automotive
Vergennes, Vt.
Scale as Shown
VAPOR SURVEY LOCATION MAPS
10/7/91
Figure 1